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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,249	01/30/2006	Markus Parusel	284215US0PCT	3428

22850 7590 10/17/2008

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EXAMINER	
INYARD, APRIL C	

ART UNIT	PAPER NUMBER
4152	

NOTIFICATION DATE	DELIVERY MODE
10/17/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/566,249	PARUSEL ET AL.	
	Examiner	Art Unit	
	APRIL C. INYARD	4152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23 and 26-28* is/are pending in the application.

4a) Of the above claim(s) *24* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23 and 26-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 April 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *04/25/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I in the reply filed on September 22, 2008 is acknowledged. The traversal is on the grounds that there is no undue burden in examining both the group I and group II claims. Applicants further argue that the groups of claims are not so unrelated as would require a burdened beyond that of the normal burdens of examination. This argument has been considered, but not found persuasive. MPEP § 808.02 recites that for the purposes of the initial requirement of a restriction, a serious burden on the examiner may be prima facie shown if the examiner shows by appropriate explanation either separate classification, separate status in the art, or a different field of search as defined in MPEP § 808.02. Since the Examiner has shown a different classification for the two groups of claims, a burden for examining both groups has been shown. The requirement is still deemed proper and is therefore made FINAL.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting

ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. **Claims 1-15, 20-23, and 27-28 are** rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over **Claims 1-8, 10-15, 17-23, 25-26 of U.S. Patent No. 7,339,732**. Although the conflicting claims are not identical, they are not patentably distinct from each other because '732 is towards a rear-projection screen comprising the diffuser sheet as presently claimed.

4. **Claims 1-15, 20-23, and 27-28 are** rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over **Claims 1-11, and 14-18 of U.S. Patent No. 7,064,894**. Although the conflicting claims are not identical, they are not patentably distinct from each other because '894 is towards a rear-projection screen comprising the diffuser sheet as presently claimed.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. **Claims 1-3, 8, 10-15, 20, 23 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ludwig (EP 0561551 A1) in view of Kimura (US Patent No. 6,602,596 B2).**

(Claims 1 and 2) Ludwig teaches a diffuser sheet for LCD applications *('551, page 2, lines 1-2)* encompassing at least one light-scattering polymethyl methacrylate layer which comprises a polymethyl methacrylate matrix *('551, page 2, line 40)* and:

a. also from 0.5 to 59.5% by weight, based on the weight of the light- scattering polymethyl methacrylate layer *('551, 1-40% by weight, page 3, line 37)*, of spherical scattering particles (A) whose median size is in the range from 0.1 to 40 micrometers *('551, 0.1 to 500 microns, page 3, lines 28-29)*,

b. and whose refractive index differs from that of the polymethyl methacrylate matrix by a value in the range from 0.02 to 0.2 *('551, page 3, lines 32-35 and 51-52; Claim 8)*,

c. and from 0.5 to 59.5% by weight, based on the weight of the light- scattering polymethyl methacrylate layer *('551, 1-40% by weight, page 3, line 37)*, of spherical

particles (B) whose median size is in the range from 10 to 150 micrometers *('551, 0.1 to 500 microns, page 3, lines 28-29)*

d. and whose refractive index differs from that of the polymethyl methacrylate matrix by a value in the range from 0 to 0.2 *('551, page 3, lines 32-35 and 51-52; Claim 8)*,

e. where the total concentration of the spherical scattering particles (A) and particles (B) is in the range from 1 to 60% by weight, based on the weight of the light-scattering polymethyl methacrylate layer *('551, 1-40% by weight, page 3, line 37)*,

f. and the spherical scattering particles (A) and spherical particles (B) have a different median particle size *('551, the particle size of at least 90% by weight of the particles falls within the range of the average particles size +/- 20% and the particles being substantially spherical in shape, pages 2, lines 45-46)*

With respect to the specific discrimination between particles A and B, the Exmainer interprets the size distribution as taught by Ludwig to include particles of varying sizes and therefore a certain population will have the properties of particles A and likewise B.

Ludwig ('551) discloses that the gain, an optical property related to light transmittance, of the diffuser sheet is greater than one at and beyond 25-30 degrees, but fails to teach the transmittance of the diffuser sheet **(Claims 1 and 20)** and likewise fails to teach the scattering power wherein the ratio of the surface roughness **(Claims 1-2 and 11)** to the particle diameter falls within a specific range.

However, Kimura ('596) discloses a light diffusion sheet with a binder resin comprising particles with varying diameters wherein the total light transmittance is "70% or more" and the haze is "80% or more" and the light transmittance of the diffusion sheet can be calculated by the formula given by Kimura as follows: Td (%) / Tt (%) x 100 = H (%), where Td is diffused light transmission, Tt is total light transmission, and H is haze. Therefore, Kimura teaches the transmittance of the diffuser sheet of **Claims 1 and 20** is approximately 50-70% *('596, col 3, lines 13-32).*

With respect to the scattering power greater than 0.3 **(Claims 1 and 23)** wherein the ratio of ($Rz^2/Dp_{[B]}^3$), Kimura teaches surface roughness and ten point height of surface irregularities wherein the particles used in the examples provided ranged in diameter from about 6 to 30 micrometers, and the surface roughness likewise ranged from about 1 to 3 *('596, Table 2).* The Examiner notes that scattering power is a function of the size distribution and type of particles present within the binder matrix and surface roughness. Therefore, Kimura teaches the scattering power greater than 0.3 of **Claims 1 and 23** and the ratio of the surface roughness to the particle diameter of **Claims 1, 2 and 20** that ranges from about 0.0007 to 0.005 *('596, using row 2 of Table 2, 1-4.36 micrometers)* and 0.01 to 0.06 *('596, using row 3 of Table 2, 4.49 to 19.31 micrometers).*

At the time of the invention, it would have been obvious to one of ordinary skill in the art to specifically modify the particle-containing poly(methyl) methacrylate diffuser sheet taught by Ludwig to have the light transmittance and surface roughness to diameter ratios as taught by Kimura because these optical properties depend directly on the coefficient of variation of the

particle diameter distribution and concentration of particles which ultimately contribute to a diffuser sheet with the desired luminance and light diffusing properties *('596, col 4, lines 1-7).*

The Examiner deems that it would have been obvious to one having ordinary skill in the art to have determined the optimum value of a results effective variable such as the light transmittance and surface roughness to particle diameter ratio as a function of scattering power through routine experimentation, especially given the teaching in Kimura regarding the desire to optimize the light diffusing properties by varying the concentration and size distribution of particles for the intended application, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 205 USPQ 215 (CCPA 1980); *In re Geisler*, 116 F. 3d 1465, 43 USPQ2d 1362, 1365 (Fed. Cir. 1997); *In re Aller*, 220 F.2d, 454, 456, 105 USPQ 233, 235 (CCPA 1955).

(Claim 3) Ludwig ('551) teaches the diffuser sheet according to Claim 1 (see above) wherein the ratio of the concentration of the particles (B) to the thickness of the light-scattering polymethyl methacrylate layer is greater than or equal to 2.5% by weight/mm *(about 2 – 80% by weight/mm)* because Ludwig teaches that the diffuser sheet is 0.5 mm *('551, page 1, line 4)* and the concentration of particles is 1-40%. Therefore Ludwig teaches the ratio as claimed.

(Claim 8) Ludwig ('551) teaches the diffuser sheet of Claim 1 (see above), wherein the spherical particles B comprise crosslinked polystyrene and/or poly(meth)acrylates *('551, page 3, alkyl(meth)acrylate, styrene which may be homopolymers, copolymers or mixtures as well as multi-staged polymeric materials, lines 20-24; spherical polymer particles are core/shell polymer particles...cross-linking agent, lines 48-50).*

(Claim 10) Ludwig ('551) teaches the diffuser sheet of Claim 1 (see above), wherein the matrix of the light-scattering polymethyl methacrylate layer is 1.46-1.49 *('551, Col 6, lines 24-25 and lines 34-36).* Ludwig teaches a diffuser sheet with matrix refractive indices substantially close to that of the instant claims such that one of ordinary skill would have expected compositions that are in such close proportions to those in prior art to be prima facie obvious, and to have same properties. *Titanium Metals Corp.,* 227 USPQ 773 (CA FC 1985).

(Claim 12) Ludwig ('551) teaches the diffuser sheet of Claim 1 (see above), wherein the median size of the spherical particle B is great by at least 5 micrometers than the median size of the scattering particles A *('551, the particle size of at least 90% by weight of the particles falls within the range of the average particles size +/- 20% and the particles being substantially spherical in shape, pages 2, lines 45-46)*

(Claims 13 and 14) Ludwig ('551) teaches the differ sheet of Claim 1 (see above), and that the particle sizes can range from 0.1 to 500 micrometers *(page 3, lines 28-29).* Ludwig further discloses that the particles size distribution has 90% by weight of the particles within the range of the average particle size is +/- 20%. If 90% of the particles are 15 micrometers, then 10% are +/- 20% of the size of 15 micrometers, that being either 12 or 18 micrometers. Therefore, Ludwig teaches the median sizes of particles A and B of the instant claims. It would also be obvious to one having ordinary skill in the art, as described above, to vary the sizes of particles depending on the desired light diffusion properties.

(Claim 15) Ludwig ('551) teaches the diffuser sheet of Claim 1 (see above), but does not specifically teach that the scratch-resistant properties of the diffuser sheet.

However, Kimura ('596) discloses that the greater the unevenness, i.e. surface roughness, of the diffuser sheet, the more resistant the sheet becomes to damage or scratching *('596, Col 9, lines 46-51)*. Given that Ludwig and Kimura use like materials in a like manner as claimed, it would therefore be expected that the diffuser sheets will have the same characteristics claimed, particularly the ability to resist scratching at a force of at most 0.7 N, absence a showing of unexpected results.

(Claim 28) Ludwig ('551) teaches the diffuser sheet of Claim 1 (see above), wherein the sheet is produced by extruding a moulding composition *('551, preparation of sheet, page 6)* for a rear-projection screen comprising said diffuser sheet of **Claim 28** *('551, Title, Abstract, Claims)*.

8. **Claims 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ludwig (EP 0561551 A1) in view of Kimura (US Patent No. 6,602,596 B2) and Coveleskie et al. (US Publication No. 2004/033427 A1).**

Ludwig ('551) and Kimura ('596) teach the diffuser sheet of Claim 1 (see above). However, Ludwig and Kimura do not specifically specify the gloss of the light-scattering polymethyl methacrylate layer is smaller than or equal to 40 when measured at 80 degrees. The gloss of a light-scattering layer taught by Ludwig and Kimura is known to be as claimed as disclosed by Coveleski *('427, layer with surface roughness of 1 micrometer has a gloss of 5 to 35, typically about 20 to 30 gloss units measured at 85 degrees, paragraphs [0083] and [0085])*. Thus, the diffuser sheet taught by Ludwig and Kimura inherently has the claimed surface gloss.

9. **Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ludwig (EP 0561551 A1) in view of Kimura (US Patent No. 6,602,596 B2) and Schultes (US Publication 2002/0123565 A1).**

The applied reference has common inventors with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Ludwig in view of Kimura teaches the diffuser sheet of Claim 1 (see above).

Ludwig teaches that the thickness of the diffuser sheet is in the range from 0.25 to 1.25 mm *('551, second layer, page 3, line 15)*, more specifically 0.5 mm **(Claim 7)**, and therefore fail to specifically teach the ratios of **Claims 5 and 6**, as these ratios depend on the thickness of the diffuser sheet.

However, Schultes teaches the thickness of the diffuser sheet is between 0.1 and 25 mm *('565, paragraph [0116], Claim 21)*. Ludwig in view of Kimura teaches the particle size distribution and concentrations. Therefore, in view of Schultes, the ratios of claims 5 and 6 are disclosed.

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the thickness of the diffuser sheet taught by Ludwig and Kimura with the thickness taught by Schultes because the thickness of the sheet depends on the application for use and the thicknesses of the instant claim are those of conventional dimensions *('565, paragraph [0116])*.

10. **Claims 9 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ludwig (EP 0561551 A1) in view of Kimura (US Patent No. 6,602,596 B2) and Ida (US Patent No. 5,004,785).**

Ludwig in view of Kimura teaches the diffuser sheet of Claim 1 (see above).

Ludwig and Kimura do not specifically teach barium sulfate as particle A (Claim 9), the refractive index of the matrix of the light-scattering layer (Claim 10), or the yellowness index (Claim 21) of the diffuser sheet.

However, these properties are well-known in the art as taught by Ida.

With respect to **Claim 9**, Ida ('785) teaches a diffusing sheet with two distinct particle sizes incorporated into a resin matrix, where barium sulfate is well-known in the art as an inorganic fine particle diffuser *('785, Col 1, lines 22-24)*. At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the diffuser sheet taught by Ludwig and Kimura with the use of barium sulfate as particle A because Ida teaches that this

inorganic fine particle is replete in the art as a diffusing particle it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious engineering choice. *In re Leshin*, 125 USPQ 416.

With respect to **Claim 21**, the yellowness index for the diffuser sheet taught by Ludwig and Kimura is known to be as claimed, as taught by Ida *('785, Col 4, lines 21-27)*. Therefore, the diffuser sheet as taught by Ludwig and Kimura inherently has the claimed yellowness index.

11. **Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ludwig (EP 0561551 A1) in view of Kimura (US Patent No. 6,602,596 B2), Wu (US Patent No. 5,237,004) and Plastic Material Data Sheets (Kipp, Dale O. (2004). Plastic Material Data Sheets. MatWeb - Division of Automation Creation, Inc. *http://knovel.com/web/portal/browse/display?_EXT_KNOVEL_DISPLAY_bookid=1023&VertcalID=0*).**

Ludwig and Kimura teach the diffuser sheet of Claim 1 (see above).

Ludwig and Kimura do not specifically teach that the long-term service temperature of the sheet is at least 60 degrees C **(Claim 16)**, that the modulus of elasticity of the sheet is at least 2000 MPa **(Claim 17)**, or that the longitudinal expansion of the sheet is at most 5% **(Claim 18)**

However, the long-term service temperature and modulus of elasticity of the diffuser sheet taught by Ludwig and Kimura is known to be as claimed. Plastic Material Data Sheets for a polymethyl methacrylate sheet teaches that without a particle diffuser, standard acrylic sheeting has a maximum service temperature of 70 degrees C, a modulus of elasticity of 3300 MPa, and a longitudinal expansion (elongation at break) of 4.5%. Wu ('004) teaches that addition of particle

diffusers slightly lowers the impact resistance and service temperature of a polymethyl methacrylate matrix *('004, Example 145, Col 32, lines 49-50)*. Therefore, the diffuser sheet as taught by Ludwig and Kimura inherently has the claimed long-term service temperature, modulus of elasticity and longitudinal expansion.

12. **Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ludwig (EP 0561551 A1) in view of Kimura (US Patent No. 6,602,596 B2) and Groothues (WO/03042290 A1).**

Ludwig and Kimura teach the diffuser sheet of Claim 1 (see above).

Ludwig and Kimura do not specifically teach that the weathering resistance of the sheet to DIN 53387 is at least 5000 hours.

However, Groothues teaches a polymethyl methacrylate diffuser sheet with spherical diffusing particles that exhibits improved weather resistance *('290, translation page 1, desc/clms page 2, paragraph 2 and desc/clms page 3, paragraph 2; translation page 2, desc/clms page 4, paragraph 3)*.

Given that Ludwig and Kimura use like materials in a like manner as claimed, it would therefore be expected that the weathering resistance of the sheet will have the same characteristics claimed, particularly given the teachings of Groothues, absence a showing of unexpected results.

13. **Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ludwig (EP 0561551 A1) in view of Kimura (US Patent No. 6,602,596 B2) and Yeo et al. (US Patent No. 6,346,311).**

Ludwig and Kimura teach the diffuser sheet of Claim 1 (see above).

Ludwig and Kimura do not specifically teach that the halved-intensity angle of the sheet is greater than or equal to 15 degrees.

However, halved-intensity angle of the sheet taught by Ludwig and Kimura is known to be as claimed. Yeo teaches a polymethyl methacrylate diffuser sheet with diffuser particles of varied sizes wherein the halved-intensity angle is greater than 15 degrees *('311, Table 1, alpha α½, Col 7)*. Therefore, the diffuser sheet as taught by Ludwig and Kimura inherently has the claimed halved-intensity angle.

14. **Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ludwig (EP 0561551 A1) in view of Kimura (US Patent No. 6,602,596 B2) and Nevitt (US Patent No. 6,268,961 B1).**

Ludwig in view of Kimura teach the diffuser sheet according to Claim 1 (see above), specifically for use in a rear-projection screen but fail to particularly disclose use of the sheet in an optical device (see 112 2nd, above).

However, Nevitt teaches use of a diffuser sheet containing particles and surface roughness in an optical device *('961, Abstract, col 2 lines 13-15)*.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to use the diffuser sheet taught by Ludwig in view of Kimura in an optical device taught by

Nevitt because a diffuser sheet with these properties provides some advantageous optical or mechanical properties to products that incorporate them *('961, col 9, line 19)*.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to APRIL C. INYARD whose telephone number is (571) 270-1245. The examiner can normally be reached on Monday - Friday 8:00 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Del Sole can be reached on (571) 272-1130. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/APRIL C INYARD/
Examiner, Art Unit 4152

/Joseph S. Del Sole/
Supervisory Patent Examiner, Art Unit 4152